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**Preliminary Results of 9 Apatite Fission Track Analyses of Samples From The
Slope Mountain and Sagavanirktok River Region, North Slope Alaska.**

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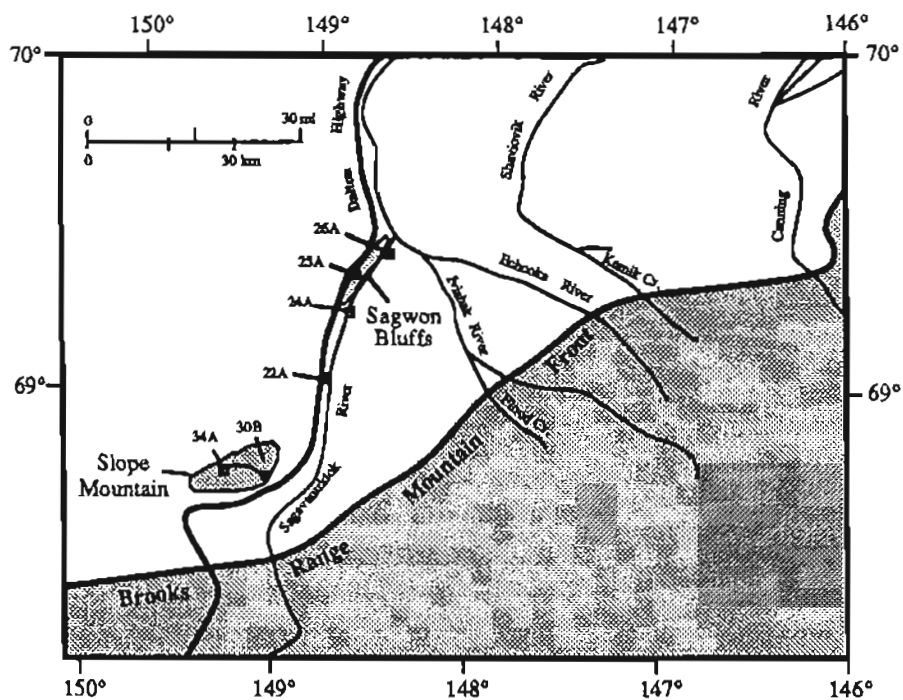


Figure 1: Map showing approximate locations of samples collected for this study. Elevations for Slope Mountain samples are given in Sample Information.

INTRODUCTION

This is a preliminary report of apatite fission track analysis data of samples from the Slope Mountain and Sagavanirktok River region of the North Slope of Alaska. During 1988, samples were collected along a vertical traverse up Slope Mountain and from outcrops located along the Sagavanirktok River just north of Slope Mountain. Apatite grains were separated from the samples and analyzed in Melbourne Australia at the La Trobe University Fission Track Research Laboratory. Separations were completed by Geotrack International. All analyses were completed by the author as part of an ongoing PhD project funded by the U.S. Minerals Management Service Continental Margins Program.

Each analysis includes two parts: 1) age report; and 2) track length distributions. The age report shows a listing of the individual grain ages, the resulting age and pertinent information used in determining the age. A guide to read the information is as follows:

<u>POS 22A-Tucktu Fm.</u>	-Sample number and unit collected
Irradiation:	-In-house number for grouping samples from the same irradiation package
Crystal	-Number of each grain counted
NS	-Number of spontaneous tracks counted
NI	-Number of induced tracks counted
NA	-Number of area units counted in grain
Ratio	-Ratio of (NS/NI) for each grain
U(ppm)	-Uranium concentration of each grain
RHOs	-Density of spontaneous tracks (per cm ²)
RHOi	-Density of induced tracks (per cm ²)
F.T.Age(Ma)	-Individual grain ages
CHI Squared	-Statistical test for determining multiple grain populations
p(chi squared)	-probability of less than 5% indicates multiple grain populations
Variance of SQR	-Statistical comparison of values of NS or NI for all grains
NS/NI	-Pooled ratio of (NS/NI). Uses total number of spontaneous and induced tracks counted for whole sample. Value used in age calculation if sample is of a single population
Mean Ratio	-Average ratio of (NS/NI) for grains
Pooled Age	-Age calculated using NS/NI(single population)
Mean Age	-Age calculated Using "Mean Ratio" (multiple populations)

The track length distributions for each sample are histograms showing the relative numbers of tracks measured at a particular length, the mean length of the tracks measured, the standard deviation of the tracks measured, and the total number of tracks measured for the sample (N).

SAMPLE INFORMATION

Fission track ages are typically determined on 20 grains of apatite from a single sample and 100 confined tracks are typically measured for each track length distribution. All 9 samples listed yielded apatite in adequate amounts for 20 individual grains to be dated. For each sample it was determined that the grains represented a single population and so the pooled age is used for each sample. Due to low U-concentrations and young (reset) apatite fission track ages, only 2 samples contained >100 confined tracks. Three other samples from the Tertiary-aged Sagavanirktok Formation located further up-section along the Sagavanirktok River did not contain adequate apatite to analyze and are not listed.

Sample No.	Formation	Elevation (ft)	Lengths (#)	Mean Length (μm)	Age (Ma)
88 POS 22A	Tucktu Fm.	-	41	14.20	36.2
88 POS 24A	Sagwon Mem.	-	82	14.23	61.8
88 POS 25A	Sagwon Mem.	-	102	14.17	64.0
88 POS 26A	Sagwon Mem.	-	70	14.05	63.4
88 POS 30B	Tucktu Fm.	2340	61	14.30	36.5
88 POS 31A	Tucktu Fm.	2510	102	14.17	36.7
88 POS 32A	Tucktu Fm.	3000	29	13.99	40.5
88 POS 33A	Chandler Fm.	3640	30	13.69	42.4
88 POS 34A	Chandler Fm.	4060	51	13.68	41.3

TRACK LENGTH DATA

Sample Number	Track Length Range (μm)													
	<5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	>17
<i>SAG RIVER</i>														
22A	1	0	0	0	0	0	1	2	4	7	9	11	6	0
24A	0	0	0	0	0	0	0	3	7	27	27	14	3	1
25A	0	0	0	0	0	0	0	0	15	26	42	16	3	0
26A	0	0	0	0	1	0	0	2	12	18	22	11	3	1
<i>SLOPE MTN.</i>														
30B	0	0	0	1	0	0	1	0	2	16	27	11	3	0
31A	1	0	0	0	0	0	0	2	12	24	38	19	6	0
32A	0	0	0	0	1	0	1	1	1	5	13	7	0	0
33A	0	0	0	1	1	0	0	4	2	6	11	2	3	0
34A	0	0	1	0	1	0	0	5	7	11	15	9	2	0

DATA FROM THE SAGAVANIRKTOK RIVER

88 POS 22A APATITE TUCKTU FM.

IRRADIATION GT053

SLIDE NUMBER 1

COUNTED BY: POS

No.	Ns	Ni	Na	RATIO U (ppm)		RHOs	RHOi	F.T. AGE (Ma)
1	18	112	64	0.161	10.7	3.200E+05	1.991E+06	68.8 ± 17.5
2	0	9	40	0.000	1.4	0.000E+00	2.560E+05	0.0 ± 0.0
3	2	10	36	0.200	1.7	6.321E+04	3.161E+05	85.5 ± 66.2
4	0	13	70	0.000	1.1	0.000E+00	2.113E+05	0.0 ± 0.0
5	0	4	30	0.000	0.8	0.000E+00	1.517E+05	0.0 ± 0.0
6	0	15	20	0.000	4.6	0.000E+00	8.533E+05	0.0 ± 0.0
7	6	67	24	0.090	17.1	2.844E+05	3.176E+06	38.4 ± 16.4
8	0	6	36	0.000	1.0	0.000E+00	1.896E+05	0.0 ± 0.0
9	1	10	70	0.100	0.9	1.625E+04	1.625E+05	42.9 ± 45.0
10	1	8	16	0.125	3.1	7.111E+04	5.689E+05	53.6 ± 56.8
11	0	4	25	0.000	1.0	0.000E+00	1.820E+05	0.0 ± 0.0
12	1	14	24	0.071	3.6	4.741E+04	6.637E+05	30.7 ± 31.7
13	14	166	40	0.084	25.4	3.982E+05	4.722E+06	36.2 ± 10.1
14	9	128	30	0.070	26.1	3.413E+05	4.855E+06	30.2 ± 10.4
15	0	7	36	0.000	1.2	0.000E+00	2.212E+05	0.0 ± 0.0
16	0	26	36	0.000	4.4	0.000E+00	8.217E+05	0.0 ± 0.0
17	0	10	60	0.000	1.0	0.000E+00	1.896E+05	0.0 ± 0.0
18	1	11	30	0.091	2.2	3.793E+04	4.172E+05	39.0 ± 40.7
19	0	12	60	0.000	1.2	0.000E+00	2.276E+05	0.0 ± 0.0
20	1	8	40	0.125	1.2	2.844E+04	2.276E+05	53.6 ± 56.8
	54	640			5.0	7.807E+04	9.253E+05	

Area of basic unit = 8.789E-07 cm²

CHI SQUARED = 17.564 WITH 19 DEGREES OF FREEDOM

P(chi squared) = 55.2 %

CORRELATION COEFFICIENT = 0.917

VARIANCE OF SQR(Ns) = 1.81

VARIANCE OF SQR(Ni) = 10.77

Ns/Ni = 0.084 ± 0.012

MEAN RATIO = 0.056 ± 0.014

Ages calculated using a zeta of 352.7 ± 3.9 for SRM612 glass

RHO D = 2.440E+06cm⁻²; ND = 5341

POOLED AGE = 36.2 ± 5.2 Ma

MEAN AGE = 24.0 ± 6.2 Ma

88 POS 24A APATITE SAGWON MEMBER

IRRADIATION GT053

SLIDE NUMBER 2

COUNTED BY: POS

No.	Ns	Ni	Na	RATIO	U (ppm)	RHOs	RHOi	F.T. AGE (Ma)
1	10	113	36	0.088	19.2	3.161E+05	3.571E+06	38.0 ± 12.5
2	0	3	50	0.000	0.4	0.000E+00	6.827E+04	0.0 ± 0.0
3	1	5	30	0.200	1.0	3.793E+04	1.896E+05	85.5 ± 93.7
4	12	55	12	0.218	28.0	1.138E+06	5.215E+06	93.2 ± 29.7
5	4	30	25	0.133	7.3	1.820E+05	1.365E+06	57.1 ± 30.4
6	0	3	30	0.000	0.6	0.000E+00	1.138E+05	0.0 ± 0.0
7	14	77	25	0.182	18.8	6.372E+05	3.504E+06	77.8 ± 22.6
8	2	28	25	0.071	6.8	9.102E+04	1.274E+06	30.7 ± 22.4
9	12	51	18	0.235	17.3	7.585E+05	3.224E+06	100.5 ± 32.3
10	0	4	27	0.000	0.9	0.000E+00	1.686E+05	0.0 ± 0.0
11	0	5	36	0.000	0.8	0.000E+00	1.580E+05	0.0 ± 0.0
12	1	6	49	0.167	0.7	2.322E+04	1.393E+05	71.3 ± 77.0
13	0	4	40	0.000	0.6	0.000E+00	1.138E+05	0.0 ± 0.0
14	4	28	25	0.143	6.8	1.820E+05	1.274E+06	61.2 ± 32.7
15	0	4	24	0.000	1.0	0.000E+00	1.896E+05	0.0 ± 0.0
16	22	160	40	0.138	24.4	6.258E+05	4.551E+06	58.9 ± 13.4
17	0	3	60	0.000	0.3	0.000E+00	5.689E+04	0.0 ± 0.0
18	15	84	18	0.179	28.5	9.482E+05	5.310E+06	76.4 ± 21.5
19	0	5	24	0.000	1.3	0.000E+00	2.370E+05	0.0 ± 0.0
20	0	4	20	0.000	1.2	0.000E+00	2.276E+05	0.0 ± 0.0
	97	672			6.7	1.797E+05	1.245E+06	

Area of basic unit = 8.789E-07 cm²

CHI SQUARED = 13.717 WITH 19 DEGREES OF FREEDOM

P(chi squared) = 80.0 %

CORRELATION COEFFICIENT = 0.938

VARIANCE OF SQR(Ns) = 2.77

VARIANCE OF SQR(Ni) = 12.02

Ns/Ni = 0.144 ± 0.016

MEAN RATIO = 0.088 ± 0.020

Ages calculated using a zeta of 352.7 ± 3.9 for SRM612 glass

RHO D = 2.440E+06cm⁻²; ND = 5341

POOLED AGE = 61.8 ± 6.8 Ma

MEAN AGE = 37.6 ± 8.6 Ma

88 POS 25A APATITE SAGWON MEMBER

IRRADIATION GT053
SLIDE NUMBER 3
COUNTED BY: POS

No.	Ns	Ni	Na	RATIO U (ppm)		RHOs	RHOi	F.T. AGE (Ma)
1	3	14	32	0.214	2.7	1.067E+05	4.978E+05	91.6 ± 58.3
2	4	18	28	0.222	3.9	1.625E+05	7.314E+05	94.9 ± 52.5
3	0	7	25	0.000	1.7	0.000E+00	3.186E+05	0.0 ± 0.0
4	32	156	15	0.205	63.5	2.427E+06	1.183E+07	87.7 ± 17.1
5	5	31	12	0.161	15.8	4.741E+05	2.939E+06	69.0 ± 33.3
6	0	6	15	0.000	2.4	0.000E+00	4.551E+05	0.0 ± 0.0
7	3	27	25	0.111	6.6	1.365E+05	1.229E+06	47.6 ± 29.0
8	7	25	42	0.280	3.6	1.896E+05	6.773E+05	119.4 ± 51.1
9	0	5	20	0.000	1.5	0.000E+00	2.844E+05	0.0 ± 0.0
10	3	15	25	0.200	3.7	1.365E+05	6.827E+05	85.5 ± 54.1
11	0	14	30	0.000	2.8	0.000E+00	5.310E+05	0.0 ± 0.0
12	1	7	12	0.143	3.6	9.482E+04	6.637E+05	61.2 ± 65.4
13	5	20	24	0.250	5.1	2.370E+05	9.482E+05	106.7 ± 53.4
14	2	35	60	0.057	3.6	3.793E+04	6.637E+05	24.5 ± 17.8
15	5	51	28	0.098	11.1	2.032E+05	2.072E+06	42.0 ± 19.7
16	0	6	36	0.000	1.0	0.000E+00	1.896E+05	0.0 ± 0.0
17	8	74	12	0.108	37.7	7.585E+05	7.016E+06	46.4 ± 17.3
18	4	29	20	0.138	8.9	2.276E+05	1.650E+06	59.1 ± 31.5
19	0	5	22	0.000	1.4	0.000E+00	2.586E+05	0.0 ± 0.0
20	0	4	20	0.000	1.2	0.000E+00	2.276E+05	0.0 ± 0.0
	82	549			6.7	1.855E+05	1.242E+06	

Area of basic unit = 8.789E-07 cm²

CHI SQUARED = 17.848 WITH 19 DEGREES OF FREEDOM

P(chi squared) = 53.3 %

CORRELATION COEFFICIENT = 0.951

VARIANCE OF SQR(Ns) = 2.03

VARIANCE OF SQR(Ni) = 6.61

Ns/Ni = 0.149 ± 0.018

MEAN RATIO = 0.109 ± 0.022

Ages calculated using a zeta of 352.7 ± 3.9 for SRM612 glass

RHO D = 2.440E+06cm⁻²; ND = 5341

POOLED AGE = 64.0 ± 7.7 Ma

MEAN AGE = 46.9 ± 9.4 Ma

88 POS 26A APATITE SAGWON MEMBER

IRRADIATION GT053
SLIDE NUMBER 4
COUNTED BY: POS

No.	Ns	Ni	Na	RATIO U (ppm)		RHOs	RHOi	F.T. AGE (Ma)
1	52	311	70	0.167	27.1	8.452E+05	5.055E+06	71.5 ± 10.8
2	10	112	36	0.089	19.0	3.161E+05	3.540E+06	38.3 ± 12.7
3	4	19	30	0.211	3.9	1.517E+05	7.206E+05	90.0 ± 49.5
4	1	5	25	0.200	1.2	4.551E+04	2.276E+05	85.5 ± 93.7
5	33	171	30	0.193	34.8	1.252E+06	6.485E+06	82.5 ± 15.8
6	0	4	30	0.000	0.8	0.000E+00	1.517E+05	0.0 ± 0.0
7	0	6	20	0.000	1.8	0.000E+00	3.413E+05	0.0 ± 0.0
8	3	29	21	0.103	8.4	1.625E+05	1.571E+06	44.4 ± 26.9
9	0	4	28	0.000	0.9	0.000E+00	1.625E+05	0.0 ± 0.0
10	7	26	30	0.269	5.3	2.655E+05	9.861E+05	114.8 ± 48.9
11	15	83	28	0.181	18.1	6.095E+05	3.373E+06	77.3 ± 21.7
12	0	5	12	0.000	2.5	0.000E+00	4.741E+05	0.0 ± 0.0
13	8	79	15	0.101	32.2	6.068E+05	5.992E+06	43.4 ± 16.1
14	4	29	20	0.138	8.9	2.276E+05	1.650E+06	59.1 ± 31.5
15	5	46	30	0.109	9.4	1.896E+05	1.745E+06	46.6 ± 22.0
16	21	156	24	0.135	39.7	9.956E+05	7.396E+06	57.7 ± 13.4
17	0	6	36	0.000	1.0	0.000E+00	1.896E+05	0.0 ± 0.0
18	1	7	12	0.143	3.6	9.482E+04	6.637E+05	61.2 ± 65.4
19	3	25	16	0.120	9.5	2.133E+05	1.778E+06	51.4 ± 31.4
20	0	4	12	0.000	2.0	0.000E+00	3.793E+05	0.0 ± 0.0
	167	1127			13.1	3.619E+05	2.442E+06	

Area of basic unit = 8.789E-07 cm²

CHI SQUARED = 14.478 WITH 19 DEGREES OF FREEDOM

P(chi squared) = 75.5 %

CORRELATION COEFFICIENT = 0.977

VARIANCE OF SQR(Ns) = 4.20

VARIANCE OF SQR(Ni) = 20.27

Ns/Ni = 0.148 ± 0.012

MEAN RATIO = 0.108 ± 0.019

Ages calculated using a zeta of 352.7 ± 3.9 for SRM612 glass

RHO D = 2.440E+06cm⁻²; ND = 5341

POOLED AGE = 63.4 ± 5.4 Ma

MEAN AGE = 46.3 ± 8.1 Ma

DATA FROM SLOPE MOUNTAIN

88 POS 30B APATITE TUCKTU FM.

IRRADIATION GT055
SLIDE NUMBER 1
COUNTED BY: POS

No.	Ns	Ni	Na	RATIO U (ppm)	RHOs	RHOi	F.T. AGE (Ma)	
1	7	77	8	0.091	61.8	9.956E+05	1.095E+07	37.1 ± 14.7
2	1	37	15	0.027	15.8	7.585E+04	2.807E+06	11.1 ± 11.2
3	13	159	20	0.082	51.0	7.396E+05	9.045E+06	33.4 ± 9.7
4	8	56	9	0.143	39.9	1.011E+06	7.080E+06	58.3 ± 22.0
5	33	342	16	0.096	137.1	2.347E+06	2.432E+07	39.4 ± 7.2
6	0	3	8	0.000	2.4	0.000E+00	4.267E+05	0.0 ± 0.0
7	1	7	12	0.143	3.7	9.482E+04	6.637E+05	58.3 ± 62.3
8	2	18	12	0.111	9.6	1.896E+05	1.707E+06	45.4 ± 33.8
9	4	29	8	0.138	23.3	5.689E+05	4.124E+06	56.3 ± 30.0
10	1	10	16	0.100	4.0	7.111E+04	7.111E+05	40.8 ± 42.8
11	3	15	9	0.200	10.7	3.793E+05	1.896E+06	81.4 ± 51.5
12	6	111	16	0.054	44.5	4.267E+05	7.893E+06	22.1 ± 9.3
13	0	9	20	0.000	2.9	0.000E+00	5.120E+05	0.0 ± 0.0
14	7	91	10	0.077	58.4	7.964E+05	1.035E+07	31.4 ± 12.3
15	7	81	10	0.086	52.0	7.964E+05	9.216E+06	35.3 ± 13.9
16	14	163	20	0.086	52.3	7.964E+05	9.273E+06	35.1 ± 9.8
17	10	112	18	0.089	39.9	6.321E+05	7.080E+06	36.5 ± 12.1
18	2	18	12	0.111	9.6	1.896E+05	1.707E+06	45.4 ± 33.8
19	6	47	12	0.128	25.1	5.689E+05	4.456E+06	52.1 ± 22.6
20	2	36	12	0.056	19.2	1.896E+05	3.413E+06	22.7 ± 16.5
	127	1421			34.7	5.494E+05	6.148E+06	

Area of basic unit = 8.789E-07 cm²

CHI SQUARED = 10.009 WITH 19 DEGREES OF FREEDOM

P(chi squared) = 95.3 %

CORRELATION COEFFICIENT = 0.977

VARIANCE OF SQR(Ns) = 1.84

VARIANCE OF SQR(Ni) = 17.92

Ns/Ni = 0.089 ± 0.008

MEAN RATIO = 0.091 ± 0.011

Ages calculated using a zeta of 352.7 ± 3.9 for SRM612 glass

RHO D = 2.323E+06cm⁻²; ND = 5105

POOLED AGE = 36.5 ± 3.4 Ma

MEAN AGE = 37.1 ± 4.5 Ma

88 POS 31A APATITE TUCKTU FM.

IRRADIATION GT055
 SLIDE NUMBER 2
 COUNTED BY: POS

No.	Ns	Ni	Na	RATIO	U (ppm)	RHOs	RHOi	F.T. AGE (Ma)
1	1	25	20	0.040	8.0	5.689E+04	1.422E+06	16.4 ± 16.7
2	18	129	16	0.140	51.7	1.280E+06	9.173E+06	56.9 ± 14.4
3	5	38	12	0.132	20.3	4.741E+05	3.603E+06	53.7 ± 25.6
4	0	7	21	0.000	2.1	0.000E+00	3.793E+05	0.0 ± 0.0
5	0	3	9	0.000	2.1	0.000E+00	3.793E+05	0.0 ± 0.0
6	3	92	24	0.033	24.6	1.422E+05	4.362E+06	13.3 ± 7.8
7	0	3	21	0.000	0.9	0.000E+00	1.625E+05	0.0 ± 0.0
8	2	24	16	0.083	9.6	1.422E+05	1.707E+06	34.0 ± 25.1
9	0	6	6	0.000	6.4	0.000E+00	1.138E+06	0.0 ± 0.0
10	12	101	8	0.119	81.0	1.707E+06	1.436E+07	48.5 ± 14.8
11	2	13	12	0.154	7.0	1.896E+05	1.233E+06	62.7 ± 47.7
12	6	89	25	0.067	22.8	2.731E+05	4.051E+06	27.6 ± 11.6
13	3	18	16	0.167	7.2	2.133E+05	1.280E+06	67.9 ± 42.4
14	0	3	18	0.000	1.1	0.000E+00	1.896E+05	0.0 ± 0.0
15	5	68	9	0.074	48.5	6.321E+05	8.597E+06	30.1 ± 13.9
16	5	57	20	0.088	18.3	2.844E+05	3.243E+06	35.8 ± 16.7
17	0	4	21	0.000	1.2	0.000E+00	2.167E+05	0.0 ± 0.0
18	10	112	20	0.089	35.9	5.689E+05	6.372E+06	36.5 ± 12.1
19	13	159	20	0.082	51.0	7.396E+05	9.045E+06	33.4 ± 9.7
20	2	18	12	0.111	9.6	1.896E+05	1.707E+06	45.4 ± 33.8
	87	969			19.1	3.036E+05	3.382E+06	

Area of basic unit = 8.789E-07 cm²

CHI SQUARED = 13.246 WITH 19 DEGREES OF FREEDOM

P(chi squared) = 82.6 %

CORRELATION COEFFICIENT = 0.905

VARIANCE OF SQR(Ns) = 1.83

VARIANCE OF SQR(Ni) = 13.19

Ns/Ni = 0.090 ± 0.010

MEAN RATIO = 0.069 ± 0.013

Ages calculated using a zeta of 352.7 ± 3.9 for SRM612 glass

RHO D = 2.323E+06cm⁻²; ND = 5105

POOLED AGE = 36.7 ± 4.2 Ma

MEAN AGE = 28.1 ± 5.2 Ma

88 POS 32A APATITE TUCKTU FM.

IRRADIATION GT055
 SLIDE NUMBER 3
 COUNTED BY: POS

No.	Ns	Ni	Na	RATIO	U (ppm)	RHOs	RHOi	F.T. AGE (Ma)
1	4	49	9	0.082	34.9	5.057E+05	6.195E+06	33.4 ± 17.4
2	1	6	12	0.167	3.2	9.482E+04	5.689E+05	67.9 ± 73.4
3	0	4	12	0.000	2.1	0.000E+00	3.793E+05	0.0 ± 0.0
4	0	4	24	0.000	1.1	0.000E+00	1.896E+05	0.0 ± 0.0
5	4	21	15	0.190	9.0	3.034E+05	1.593E+06	77.6 ± 42.3
6	1	15	30	0.067	3.2	3.793E+04	5.689E+05	27.3 ± 28.2
7	0	2	18	0.000	0.7	0.000E+00	1.264E+05	0.0 ± 0.0
8	2	9	10	0.222	5.8	2.276E+05	1.024E+06	90.4 ± 70.7
9	2	16	20	0.125	5.1	1.138E+05	9.102E+05	51.0 ± 38.3
10	1	5	15	0.200	2.1	7.585E+04	3.793E+05	81.4 ± 89.2
11	0	4	20	0.000	1.3	0.000E+00	2.276E+05	0.0 ± 0.0
12	2	20	20	0.100	6.4	1.138E+05	1.138E+06	40.8 ± 30.3
13	3	28	9	0.107	20.0	3.793E+05	3.540E+06	43.7 ± 26.6
14	9	110	12	0.082	58.8	8.533E+05	1.043E+07	33.4 ± 11.6
15	2	19	10	0.105	12.2	2.276E+05	2.162E+06	43.0 ± 32.0
16	2	38	10	0.053	24.4	2.276E+05	4.324E+06	21.5 ± 15.6
17	2	17	18	0.118	6.1	1.264E+05	1.075E+06	48.0 ± 35.9
18	0	2	8	0.000	1.6	0.000E+00	2.844E+05	0.0 ± 0.0
19	1	8	16	0.125	3.2	7.111E+04	5.689E+05	51.0 ± 54.1
20	6	47	12	0.128	25.1	5.689E+05	4.456E+06	52.1 ± 22.6
	42	424			9.1	1.593E+05	1.608E+06	

Area of basic unit = 8.789E-07 cm²

CHI SQUARED = 6.811 WITH 19 DEGREES OF FREEDOM

P(chi squared) = 99.5 %

CORRELATION COEFFICIENT = 0.932

VARIANCE OF SQR(Ns) = 0.74

VARIANCE OF SQR(Ni) = 5.24

Ns/Ni = 0.099 ± 0.016

MEAN RATIO = 0.093 ± 0.016

Ages calculated using a zeta of 352.7 ± 3.9 for SRM612 glass

RHO D = 2.323E+06cm⁻²; ND = 5105

POOLED AGE = 40.5 ± 6.6 Ma

MEAN AGE = 38.2 ± 6.4 Ma

88 POS 33A APATITE CHANDLER FM.

IRRADIATION GT055
SLIDE NUMBER 4
COUNTED BY: POS

No.	Ns	Ni	Na	RATIO U (ppm)		RHOs	RHOi	F.T. AGE (Ma)
1	4	50	10	0.080	32.1	4.551E+05	5.689E+06	32.7 ± 17.0
2	6	58	20	0.103	18.6	3.413E+05	3.300E+06	42.2 ± 18.1
3	1	8	10	0.125	5.1	1.138E+05	9.102E+05	51.0 ± 54.1
4	1	11	12	0.091	5.9	9.482E+04	1.043E+06	37.1 ± 38.8
5	2	16	10	0.125	10.3	2.276E+05	1.820E+06	51.0 ± 38.3
6	2	9	12	0.222	4.8	1.896E+05	8.533E+05	90.4 ± 70.7
7	1	9	16	0.111	3.6	7.111E+04	6.400E+05	45.4 ± 47.8
8	1	16	24	0.062	4.3	4.741E+04	7.585E+05	25.6 ± 26.3
9	0	4	8	0.000	3.2	0.000E+00	5.689E+05	0.0 ± 0.0
10	2	17	18	0.118	6.1	1.264E+05	1.075E+06	48.0 ± 35.9
11	3	27	18	0.111	9.6	1.896E+05	1.707E+06	45.4 ± 27.6
12	10	111	24	0.090	29.7	4.741E+05	5.262E+06	36.8 ± 12.2
13	0	6	20	0.000	1.9	0.000E+00	3.413E+05	0.0 ± 0.0
14	0	5	12	0.000	2.7	0.000E+00	4.741E+05	0.0 ± 0.0
15	5	34	16	0.147	13.6	3.556E+05	2.418E+06	60.0 ± 28.7
16	4	26	20	0.154	8.3	2.276E+05	1.479E+06	62.7 ± 33.7
17	1	5	15	0.200	2.1	7.585E+04	3.793E+05	81.4 ± 89.2
18	0	7	18	0.000	2.5	0.000E+00	4.425E+05	0.0 ± 0.0
19	1	6	10	0.167	3.8	1.138E+05	6.827E+05	67.9 ± 73.4
20	2	18	10	0.111	11.5	2.276E+05	2.048E+06	45.4 ± 33.8
	46	443			9.4	1.727E+05	1.663E+06	

Area of basic unit = 8.789E-07 cm²

CHI SQUARED = 5.768 WITH 19 DEGREES OF FREEDOM

P(chi squared) = 99.8 %

CORRELATION COEFFICIENT = 0.958

VARIANCE OF SQR(Ns) = 0.74

VARIANCE OF SQR(Ni) = 4.80

Ns/Ni = 0.104 ± 0.016

MEAN RATIO = 0.101 ± 0.014

Ages calculated using a zeta of 352.7 ± 3.9 for SRM612 glass

RHO D = 2.323E+06cm⁻²; ND = 5105

POOLED AGE = 42.4 ± 6.6 Ma

MEAN AGE = 41.2 ± 5.9 Ma

88 POS 34A APATITE CHANDLER FM.

IRRADIATION GT055
 SLIDE NUMBER 5
 COUNTED BY: POS

No.	Ns	Ni	Na	RATIO U (ppm)		RHOs	RHOi	F.T. AGE (Ma)
1	4	32	9	0.125	22.8	5.057E+05	4.045E+06	51.0 ± 27.1
2	6	57	18	0.105	20.3	3.793E+05	3.603E+06	43.0 ± 18.5
3	1	11	12	0.091	5.9	9.482E+04	1.043E+06	37.1 ± 38.8
4	6	59	12	0.102	31.5	5.689E+05	5.594E+06	41.5 ± 17.8
5	6	47	12	0.128	25.1	5.689E+05	4.456E+06	52.1 ± 22.6
6	2	11	32	0.182	2.2	7.111E+04	3.911E+05	74.1 ± 56.9
7	2	41	8	0.049	32.9	2.844E+05	5.831E+06	20.0 ± 14.5
8	1	9	9	0.111	6.4	1.264E+05	1.138E+06	45.4 ± 47.8
9	1	16	24	0.062	4.3	4.741E+04	7.585E+05	25.6 ± 26.3
10	6	53	8	0.113	42.5	8.533E+05	7.538E+06	46.2 ± 19.9
11	2	13	12	0.154	7.0	1.896E+05	1.233E+06	62.7 ± 47.7
12	12	99	18	0.121	35.3	7.585E+05	6.258E+06	49.5 ± 15.1
13	4	30	20	0.133	9.6	2.276E+05	1.707E+06	54.4 ± 29.0
14	0	4	8	0.000	3.2	0.000E+00	5.689E+05	0.0 ± 0.0
15	2	15	10	0.133	9.6	2.276E+05	1.707E+06	54.4 ± 41.0
16	5	55	9	0.091	39.2	6.321E+05	6.953E+06	37.1 ± 17.4
17	6	53	12	0.113	28.3	5.689E+05	5.025E+06	46.2 ± 19.9
18	7	79	16	0.089	31.7	4.978E+05	5.618E+06	36.2 ± 14.3
19	3	27	12	0.111	14.4	2.844E+05	2.560E+06	45.4 ± 27.6
20	6	99	9	0.061	70.6	7.585E+05	1.252E+07	24.8 ± 10.4
	82	810			19.2	3.455E+05	3.413E+06	

Area of basic unit = 8.789E-07 cm²

CHI SQUARED = 5.669 WITH 19 DEGREES OF FREEDOM

P(chi squared) = 99.9 %

CORRELATION COEFFICIENT = 0.900

VARIANCE OF SQR(Ns) = 0.63

VARIANCE OF SQR(Ni) = 5.56

Ns/Ni = 0.101 ± 0.012

MEAN RATIO = 0.104 ± 0.009

Ages calculated using a zeta of 352.7 ± 3.9 for SRM612 glass

RHO D = 2.323E+06cm⁻²; ND = 5105

POOLED AGE = 41.3 ± 4.8 Ma

MEAN AGE = 42.3 ± 3.7 Ma

